

Claims

1. A plasticating screw for an extruder or extrusion press having a high polymer melt through-put, wherein the plasticating screw is received and rotatably driven in a cylindrical barrel in order to transport the admitted plasticatable polymer to an extruder nozzle located at the other end, the polymer undergoing plastication and being transported and mixed by a screw channel formed by a first helically running flight, and wherein in at least one region of the longitudinal extent of the plasticating screw at least a second helically running flight overlaps the first flight, characterised in that the cross-sections of the at least two flights (4, 5) in the overlapping region are reduced to such an extent that their overall cross-section corresponds to the cross-section of the first flight (4) immediately before the overlapping region (7).
2. A plasticating screw according to claim 1, characterised in that in the region of the overlap the width of the screw channel (2) is divided by the second flight (5).
3. A screw with changing flight according to claim 1, characterised in that after the start of the second flight (5) the screw channel (2) continues in the direction of flow of the material as a double screw channel.
4. A plasticating screw according to claims 1 to 3, characterised in that the overlapping region of the at least two screw channels extends over at least half of a screw revolution.
5. A plasticating screw according to claims 1 to 4, characterised in that the channel width (H) of the screw channel (2) in the overlapping region is divided by the second flight (5) approximately in a ratio of 1: 2.
6. A plasticating screw according to claims 1 to 5, characterised in that the

screw shaft is modified conically in the region of the at least one overlap of the screw flights.

7. A plasticating screw according to claims 1 to 6, characterised in that the channel depth T between at least two further overlaps is modified axially parallel over 360 degrees for the purpose of tapering the screw shaft.